

# Work Order ID 106853

**\*106853\***

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September-11-13 11:47:15 AM

Item ID: D4148-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Fwd X-Tube Lug Ass'Y  
 Start Date: 10/04/13 Start Qty: 4.00 **\*4\*** Cust Item ID:  
 Required Date: 10/04/13 Req'd Qty: 4.00 **\*4\*** Customer:  
 Reference:

Approvals: Process Plan: MLJ Date: 13-09-12 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr                       | Revision Nbr             |                      |         |        |              |               |               |                  |                |
| D4148                          | E                        |                      |         |        |              |               |               |                  |                |

100 0.00  
**\*100\***  
 Small Fab Memo 0.00  
 Small Fab 1- Assemble as per dwg

DAS  
36  
9-89

110 0.00  
**\*110\***  
 QC Memo 0.00  
 Quality Control

DAS  
27  
9-89  
13 10 16

120 0.00  
**\*120\***  
 Packaging Memo 0.00  
 Packaging

4x DAS 28 9-89 13-10-16

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |   |   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|---|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>  | Water Jet <input type="checkbox"/>  | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>  | Prod. Eng. Coord. <input type="checkbox"/>  | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>  | Rec/Store/Packaging <input type="checkbox"/>  | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>  | Supplier <input type="checkbox"/>   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |   |                   |                    |             |              |              |
| Operator      |      |      |     |   |                   |                    |             |              |              |
| Material      |      |      |     |   |                   |                    |             |              |              |
| Setup         |      |      |     |   |                   |                    |             |              |              |
| Other         |      |      |     |   |                   |                    |             |              |              |
| Process       |      |      |     |   |                   |                    |             |              |              |
| Supplier      |      |      |     |   |                   |                    |             |              |              |
| Training      |      |      |     |   |                   |                    |             |              |              |
| Unapproved    |      |      |     |   |                   |                    |             |              |              |

**FAULT CATEGORY**

| Landing Gear  | General                                 | Other  |
|---|---|--|
| <input type="checkbox"/> Bending                      | <input type="checkbox"/> Bend           | <input type="checkbox"/> Grain                           |
| <input type="checkbox"/> Centre Not Concentric to O/S | <input type="checkbox"/> BOM/Route      | <input type="checkbox"/> Hardware                        |
| <input type="checkbox"/> Cracks                       | <input type="checkbox"/> Broken/Damaged | <input type="checkbox"/> Inspection Incomplete           |
| <input type="checkbox"/> Crushed/Crimped              | <input type="checkbox"/> Burrs          | <input type="checkbox"/> Instructions Incomplete/Unclear |
| <input type="checkbox"/> Cuffs                        | <input type="checkbox"/> Contamination  | <input type="checkbox"/> Maintenance                     |
| <input type="checkbox"/> Heat Treat                   | <input type="checkbox"/> Countersink    | <input type="checkbox"/> Mislabeled                      |
| <input type="checkbox"/> Inspection Strip in Tube     | <input type="checkbox"/> Cut Too Short  | <input type="checkbox"/> Misread                         |
| <input type="checkbox"/> Ripples in Bend              | <input type="checkbox"/> Drill Holes    | <input type="checkbox"/> Offset                          |
| <input type="checkbox"/> Torque Waves in Extrusion    | <input type="checkbox"/> Drawing        | <input type="checkbox"/> Out of Calibration              |
| <input type="checkbox"/> Turning Sequence             | <input type="checkbox"/> Finish         | <input type="checkbox"/> Out of Sequence                 |
| <input type="checkbox"/> Wave/Twist in Tube           | <input type="checkbox"/> Folio          | <input type="checkbox"/> Outside Dimensions              |
|   |   | <input type="checkbox"/> Ovalized                        |
|   |   | <input type="checkbox"/> Over/Under tolerance            |
|   |   | <input type="checkbox"/> Part Incorrect                  |
|   |   | <input type="checkbox"/> Part Lost/Missing               |
|   |   | <input type="checkbox"/> Part Moved                      |
|   |   | <input type="checkbox"/> Positioned Wrong                |
|   |   | <input type="checkbox"/> Power Loss/Surge                |
|   |   | <input type="checkbox"/> Pressure/Forced                 |
|   |   | <input type="checkbox"/> Temperature/Cure                |
|   |   | <input type="checkbox"/> Weld                            |
|   |   | <input type="checkbox"/> Wrong Stock Pulled              |
|   |   | <input type="checkbox"/> Other                           |

**Work Order ID 106853****\*106853\***

Page 2

September-11-13 11:47:15 AM

Item ID: D4148-041      Accept      **\*N900040100\***      Setup Start **\*NS1\***  
Revision ID:      Stop **\*NS2\***  
Item Name: Fwd X-Tube Lug Ass'Y  
Start Date: 10/04/13      Start Qty: 4.00      **\*4\***      Cust Item ID:  
Required Date: 10/04/13      Req'd Qty: 4.00      **\*4\***      Customer:  
Reference:

Approvals:      Process Plan:      Date:      Tooling:      Date:      Run Start **\*NR1\***  
QC:      Date:      SPC (Y/N):      Date:      Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                    | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 130                            | QC21- Final Inspection - Work Order Release | 0.00                 |         |        |              |               |               |                  |                |
| <b>*130*</b>                   |   |                      |         |        |              |               |               |                  |                |
| QC                             | Memo  | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |

*[Handwritten signature]* / *PL 13-10-17*

*PL 13-10-17*

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |   |  |                                    |                                    |                                    |                                    |                                    |  |  |                                    |  |                                    |                                    |                                   |  |  |                                      |  |  |                                  |  |  |                                |
|--|---|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|--|--|------------------------------------|--|------------------------------------|------------------------------------|-----------------------------------|--|--|--------------------------------------|--|--|----------------------------------|--|--|--------------------------------|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Skid-tube <input type="checkbox"/></td> <td style="width: 33%;">Crosstube <input type="checkbox"/></td> <td style="width: 33%;">Water Jet <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td>Other <input type="checkbox"/></td> </tr> </table> | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |  | Engineering <input type="checkbox"/> |  |  | Quality <input type="checkbox"/> |  |  | Other <input type="checkbox"/> |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>  | Water Jet <input type="checkbox"/>   |                                    |                                    |                                    |                                    |                                    |  |  |                                    |  |                                    |                                    |                                   |  |  |                                      |  |  |                                  |  |  |                                |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>  | Prod. Eng. Coord. <input type="checkbox"/>   |                                    |                                    |                                    |                                    |                                    |  |  |                                    |  |                                    |                                    |                                   |  |  |                                      |  |  |                                  |  |  |                                |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>  | Rec/Store/Packaging <input type="checkbox"/>   |                                    |                                    |                                    |                                    |                                    |  |  |                                    |  |                                    |                                    |                                   |  |  |                                      |  |  |                                  |  |  |                                |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>  | Supplier <input type="checkbox"/>  |                                    |                                    |                                    |                                    |                                    |  |  |                                    |  |                                    |                                    |                                   |  |  |                                      |  |  |                                  |  |  |                                |
|  |   | Engineering <input type="checkbox"/>   |                                    |                                    |                                    |                                    |                                    |  |  |                                    |  |                                    |                                    |                                   |  |  |                                      |  |  |                                  |  |  |                                |
|  |   | Quality <input type="checkbox"/>   |                                    |                                    |                                    |                                    |                                    |  |  |                                    |  |                                    |                                    |                                   |  |  |                                      |  |  |                                  |  |  |                                |
|  |   | Other <input type="checkbox"/>   |                                    |                                    |                                    |                                    |                                    |  |  |                                    |  |                                    |                                    |                                   |  |  |                                      |  |  |                                  |  |  |                                |

| Root Cause                             | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|--|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling <input type="checkbox"/> |      |      |     |   |                   |                    |             |              |              |
| Operator <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Material <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Setup <input type="checkbox"/>         |      |      |     |   |                   |                    |             |              |              |
| Other <input type="checkbox"/>         |      |      |     |   |                   |                    |             |              |              |
| Process <input type="checkbox"/>       |      |      |     |   |                   |                    |             |              |              |
| Supplier <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Training <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Unapproved <input type="checkbox"/>    |      |      |     |   |                   |                    |             |              |              |

### FAULT CATEGORY

|   |   |   |
|---|---|---|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |
|---|---|---|

☐ Ovalized  
☐ Over/Under tolerance  
☐ Part Incorrect  
☐ Part Lost/Missing  
☐ Part Moved  
☐ Positioned Wrong  
☐ Power Loss/Surge

☐ Pressure/Forced  
☐ Temperature/Cure  
☐ Weld  
☐ Wrong Stock Pulled  
☐ Other

# Picklist Print

September-11-13 11:47:14 AM

Page 1

Work Order ID: 106853

Parent Item: D4148-041

Parent Item Name: Fwd X-Tube Lug Ass'Y

Start Date: 10/04/13

Required Date: 10/04/13

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A 10.06.24 new issue DD verf:EC  
 IPP Rev:B 10.07.22 as per revB DD verf:JLM  
 DD verf:EC IPP REV:D 11.03.02 AS PER DWG REV.D DD VERF:EC  
 IPP Rev:C 10.10.29 as per revC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand  | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status            |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|-----------------|-------------|--------------|---------------|----------------|-------------------|
| MS21043-3<br>Nut                |                        | Purchased     | No          |                     |                  | 100             | Each               | 2,299.0000      | 4           | 8            | 13/10/16      |                | DAS<br>36<br>9-89 |
|                                 |                        |               |             | <u>Location</u>     |                  | <u>Loc Qty</u>  |                    | <u>Loc Code</u> |             |              |               |                |                   |
|                                 |                        |               |             | FG                  |                  | 80              |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | 103691              |                  | 80              |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | ST315               |                  | 2219            |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | 124555              |                  | 297             |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | m126741             |                  | 1922            |                    |                 |             | 8            |               |                |                   |
| MS21043-4<br>Nut                |                        | Purchased     | No          |                     |                  | 100             | Each               | 996.0000        | 1           | 12           | 13/10/16      |                | DAS<br>36<br>9-89 |
|                                 |                        |               |             | <u>Location</u>     |                  | <u>Loc Qty</u>  |                    | <u>Loc Code</u> |             |              |               |                |                   |
|                                 |                        |               |             | FG                  |                  | 36              |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | 104603              |                  | 36              |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | GA                  |                  | 2               |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | 121652              |                  | 2               |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | ST315               |                  | 958             |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | 121162              |                  | 25              |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | 122452              |                  | 16              |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | 123021              |                  | 3               |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | 123525              |                  | 29              |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | 123900              |                  | 2               |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | 125654              |                  | 123             |                    |                 |             |              |               |                |                   |
|                                 |                        |               |             | m125807             |                  | 760             |                    |                 |             | 12           |               |                |                   |

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |   |   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|---|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>  | Water Jet <input type="checkbox"/>  | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>  | Prod. Eng. Coord. <input type="checkbox"/>  | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>  | Rec/Store/Packaging <input type="checkbox"/>  | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>  | Supplier <input type="checkbox"/>   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |   |                   |                    |             |              |              |
| Operator      |      |      |     |   |                   |                    |             |              |              |
| Material      |      |      |     |   |                   |                    |             |              |              |
| Setup         |      |      |     |   |                   |                    |             |              |              |
| Other         |      |      |     |   |                   |                    |             |              |              |
| Process       |      |      |     |   |                   |                    |             |              |              |
| Supplier      |      |      |     |   |                   |                    |             |              |              |
| Training      |      |      |     |   |                   |                    |             |              |              |
| Unapproved    |      |      |     |   |                   |                    |             |              |              |

### FAULT CATEGORY

|   |   |   |
|---|---|---|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |
|---|---|---|

☐ Ovalized  
☐ Over/Under tolerance  
☐ Part Incorrect  
☐ Part Lost/Missing  
☐ Part Moved  
☐ Positioned Wrong  
☐ Power Loss/Surge

☐ Pressure/Forced  
☐ Temperature/Cure  
☐ Weld  
☐ Wrong Stock Pulled  
☐ Other

# Picklist Print

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Page 2

Work Order ID: 106853

Parent Item: D4148-041

Parent Item Name: Fwd X-Tube Lug Ass'Y

Start Date: 10/04/13

Required Date: 10/04/13

Start Qty: 4.00

Required Qty: 4.00

D2690-6  
Lanyard

Manufactured No

100 Each 41.0000

1 4

13/10/16

DAS  
36  
9-89

Location Loc Qty Loc Code

ST014 37

100513 3

103055 9

105110 10

106281 6

94775 9

ST016 4

102246 4

3

B107377 (12)

D3910-1  
Crosstube Lug

Manufactured No

100 Each 27.0000

1 4

13/10/16

DAS  
36  
9-89

Location Loc Qty Loc Code

ST464 27

103491 24

81474 2

89772 1

4

D4091-1  
Mounting Lug

Manufactured No

100 Each 15.0000

1 4

13/10/16

DAS  
36  
9-89

Location Loc Qty Loc Code

ST144 15

100346 11

97517 4

B106063 (42)

D4148-1  
Crosstube Lug Plate, Fwd

Manufactured No

100 Each 21.0000

2 8

13/10/16

DAS  
36  
9-89

Location Loc Qty Loc Code

ST144 14

106002 14

ST145 7

102771 5

85753 2

B104949 (42)

B102343 (42)

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NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|   |      |      |   |   |                   |   |             |              |  |  |   |  |
|---|------|------|---|---|-------------------|---|-------------|--------------|--|--|---|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____  |      |      |   | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |             |              |  |  |   |  |
| Root Cause  | Date | Step | Qty   | Description of work order update or Non-conformance   | Initial Chief Eng | Action Description  | Sign & Date | Verification | QC Inspector   |  |   |  |
| Doc/Data <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Equip/Tooling <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Operator <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Material <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Setup <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Other <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Process <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Supplier <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Training <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Unapproved <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| <b>FAULT CATEGORY</b>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |      |      | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |   |                   | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions   |             |              | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |  |



# Picklist Print

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Work Order ID: 106853

Parent Item: D4148-041

Parent Item Name: Fwd X-Tube Lug Ass'Y

Start Date: 10/04/13

Required Date: 10/04/13

Start Qty: 4.00

Required Qty: 4.00

D4148-3 Manufactured No  
Stud Receiver, Lower

100 Each 18.0000

1 4

13/10/16  
DAS 36 9-89

Location Loc Qty Loc Code

GA 18  
105861 18

D4148-5 Manufactured No  
Eyebolt Stud

100 Each 47.0000

1 4

13/10/16  
DAS 36 9-89

Location Loc Qty Loc Code

ST145 47  
100497 17  
105616 30

AN3C12A Purchased No  
Bolt

100 Each 69.0000

2 8

13/10/16  
DAS 36 9-89

Location Loc Qty Loc Code

ST351 69  
123648 5  
124561 62  
124858 2

AN4C13A Purchased No  
BOLT

100 Each 330.0000

3 12

13/10/16  
DAS 36 9-89

Location Loc Qty Loc Code

ST356 276  
123900 3  
m125978 100  
m126193 173  
ST514 52  
124805 52  
ST516 2  
124215 2

12

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NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |   |   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|---|---|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>  | Water Jet <input type="checkbox"/>  | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>  | Prod. Eng. Coord. <input type="checkbox"/>  | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>  | Rec/Store/Packaging <input type="checkbox"/>  | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>  | Supplier <input type="checkbox"/>   |                                      |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| Root Cause                             | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|--|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling <input type="checkbox"/> |      |      |     |   |                   |                    |             |              |              |
| Operator <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Material <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Setup <input type="checkbox"/>         |      |      |     |   |                   |                    |             |              |              |
| Other <input type="checkbox"/>         |      |      |     |   |                   |                    |             |              |              |
| Process <input type="checkbox"/>       |      |      |     |   |                   |                    |             |              |              |
| Supplier <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Training <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Unapproved <input type="checkbox"/>    |      |      |     |   |                   |                    |             |              |              |

### FAULT CATEGORY

|   |   |   |
|---|---|---|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |
|---|---|---|

|  |   |
|--|---|
| <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |
|--|---|

# Picklist Print

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Work Order ID: 106853

Parent Item: D4148-041

Parent Item Name: Fwd X-Tube Lug Ass'Y

Start Date: 10/04/13

Required Date: 10/04/13

Start Qty: 4.00

Required Qty: 4.00

MS17984-C413

Purchased

No

100

Each

49.0000

1

4

13/10/16

DAS  
36  
9-89

Quick Release Pin

Location

Loc Qty

Loc Code

ST332

15

118612

2

m125827

1

m126275

12

ST334

34

m126333

34

4

MS20615-4M18

Purchased

No

100

Each

435.0000

8

32

13/10/16

DAS  
36  
9-89

Rivet

Location

Loc Qty

Loc Code

ST312

435

125162

97

125654

338

32

NAS1149C0332R

Purchased

No

100

Each

13,228.000

4

16

13/10/16

DAS  
36  
9-89

WASHER

Location

Loc Qty

Loc Code

FP001

264

123355

264

ST292

119

123248

18

123759

10

125268

91

st510

6000

m126319

6000

ST511

6614

125654

6614

16

ST517

231

122063

26

124580

205

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NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |      |      |     |   |                   |   |             |              |              |  |  |
|--|------|------|-----|---|-------------------|---|-------------|--------------|--------------|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |      |      |     | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |             |              |              |  |  |
| Root Cause   | Date | Step | Qty | Description of work order update or Non-conformance   | Initial Chief Eng | Action Description  | Sign & Date | Verification | QC Inspector |  |  |
| Doc/Data <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Equip/Tooling <input type="checkbox"/>                       |      |      |     |   |                   |   |             |              |              |  |  |
| Operator <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Material <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Setup <input type="checkbox"/>                               |      |      |     |   |                   |   |             |              |              |  |  |
| Other <input type="checkbox"/>                               |      |      |     |   |                   |   |             |              |              |  |  |
| Process <input type="checkbox"/>                             |      |      |     |   |                   |   |             |              |              |  |  |
| Supplier <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Training <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Unapproved <input type="checkbox"/>                          |      |      |     |   |                   |   |             |              |              |  |  |

| FAULT CATEGORY  |  |  |   |  |  |   |  |  |  |  |   |  |
|---|--|--|---|--|--|---|--|--|--|--|---|--|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |  |  | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |  |  | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |  |  | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |  |

# Picklist Print

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Page 5

Work Order ID: 106853

Parent Item: D4148-041

Parent Item Name: Fwd X-Tube Lug Ass'Y

Start Date: 10/04/13

Required Date: 10/04/13

Start Qty: 4.00

Required Qty: 4.00

NAS1149C0432R

Purchased

No

100

Each

7,368.0000

6

24

13/10/16

DAS  
36  
9-89

WASHER

## Location

## Loc Qty

## Loc Code

ST292

2696

119124

6

121255

32

121825

8

122441

77

m125807

2581

24

ST510a

4672

m126221

4672

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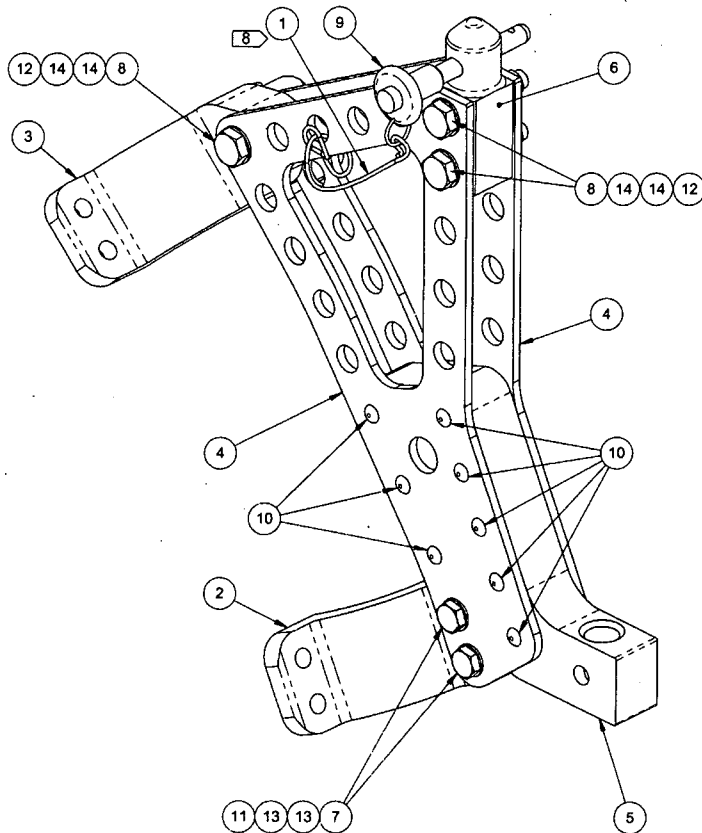
NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|   |             |             |   |   |                          |   |                        |                     |  |  |   |  |
|---|-------------|-------------|---|---|--------------------------|---|------------------------|---------------------|--|--|---|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____  |             |             |   | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                          | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                        |                     |  |  |   |  |
| <b>Root Cause</b>   | <b>Date</b> | <b>Step</b> | <b>Qty</b>  | <b>Description of work order update or Non-conformance</b>  | <b>Initial Chief Eng</b> | <b>Action Description</b>   | <b>Sign &amp; Date</b> | <b>Verification</b> | <b>QC Inspector</b>  |  |   |  |
| Doc/Data <input type="checkbox"/>   |             |             |   |   |                          |   |                        |                     |  |  |   |  |
| Equip/Tooling <input type="checkbox"/>  |             |             |   |   |                          |   |                        |                     |  |  |   |  |
| Operator <input type="checkbox"/>   |             |             |   |   |                          |   |                        |                     |  |  |   |  |
| Material <input type="checkbox"/>   |             |             |   |   |                          |   |                        |                     |  |  |   |  |
| Setup <input type="checkbox"/>  |             |             |   |   |                          |   |                        |                     |  |  |   |  |
| Other <input type="checkbox"/>  |             |             |   |   |                          |   |                        |                     |  |  |   |  |
| Process <input type="checkbox"/>  |             |             |   |   |                          |   |                        |                     |  |  |   |  |
| Supplier <input type="checkbox"/>   |             |             |   |   |                          |   |                        |                     |  |  |   |  |
| Training <input type="checkbox"/>   |             |             |   |   |                          |   |                        |                     |  |  |   |  |
| Unapproved <input type="checkbox"/>   |             |             |   |   |                          |   |                        |                     |  |  |   |  |
| <b>FAULT CATEGORY</b>   |             |             |   |   |                          |   |                        |                     |  |  |   |  |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |             |             | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |   |                          | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions   |                        |                     | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |  |



**D4148-041 FWD X-TUBE LUG ASSY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4148-041" PER DART QSI 044 6.1
- 7) WEIGHT: 3.66 lbs
- 8) ATTACH D2690-6 TO D4148-1 BY LOOPING AROUND A LIGHTENING HOLE FIRST AND THEN SECURE TO MS17984-C413

| ITEM | QTY | P/N           | DESCRIPTION            |
|------|-----|---------------|------------------------|
|      | X   | D4148-041     | FWD X-TUBE LUG ASSY    |
| 1    | 1   | D2690-6       | LANYARD                |
| 2    | 1   | D3910-1       | X-TUBE LUG             |
| 3    | 1   | D4091-1       | MOUNTING LUG           |
| 4    | 2   | D4148-1       | FWD X-TUBE LUG PLATE   |
| 5    | 1   | D4148-3       | STUD RECEIVER LOWER    |
| 6    | 1   | D4148-5       | EYEBOLT STUD           |
| 7    | 2   | AN3C12A       | BOLT                   |
| 8    | 3   | AN4C13A       | BOLT                   |
| 9    | 1   | MS17984-C413  | PIN, QUICK RELEASE     |
| 10   | 8   | MS20615-4M18  | RIVET, SOLID, PAN-HEAD |
| 11   | 2   | MS21043C3     | NUT, SELF-LOCKING      |
| 12   | 3   | MS21043C4     | NUT, SELF-LOCKING      |
| 13   | 4   | NAS1149C0332R | WASHER                 |
| 14   | 6   | NAS1149C0432R | WASHER                 |

UNCONTROLLED  
SUBJECT

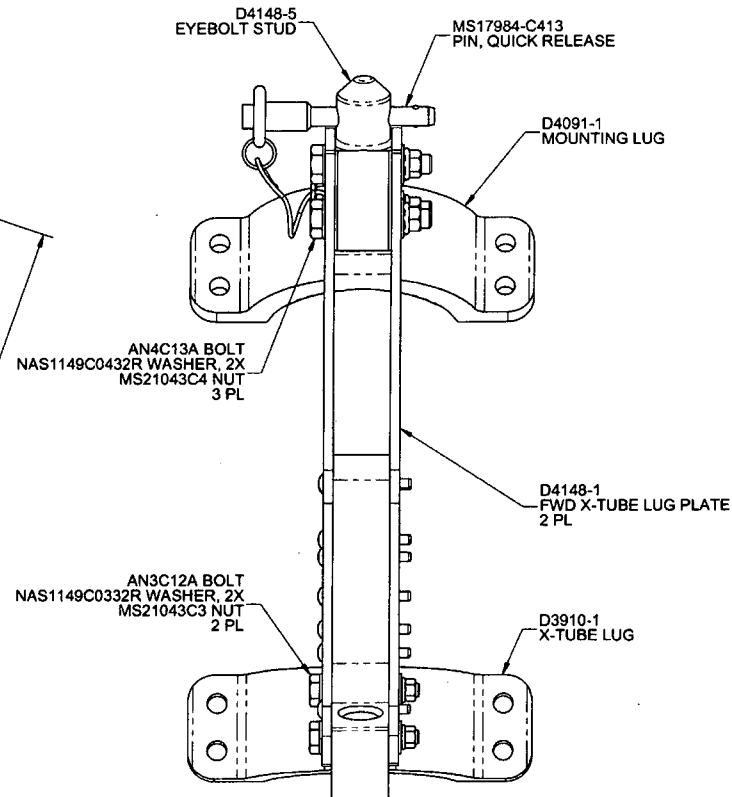
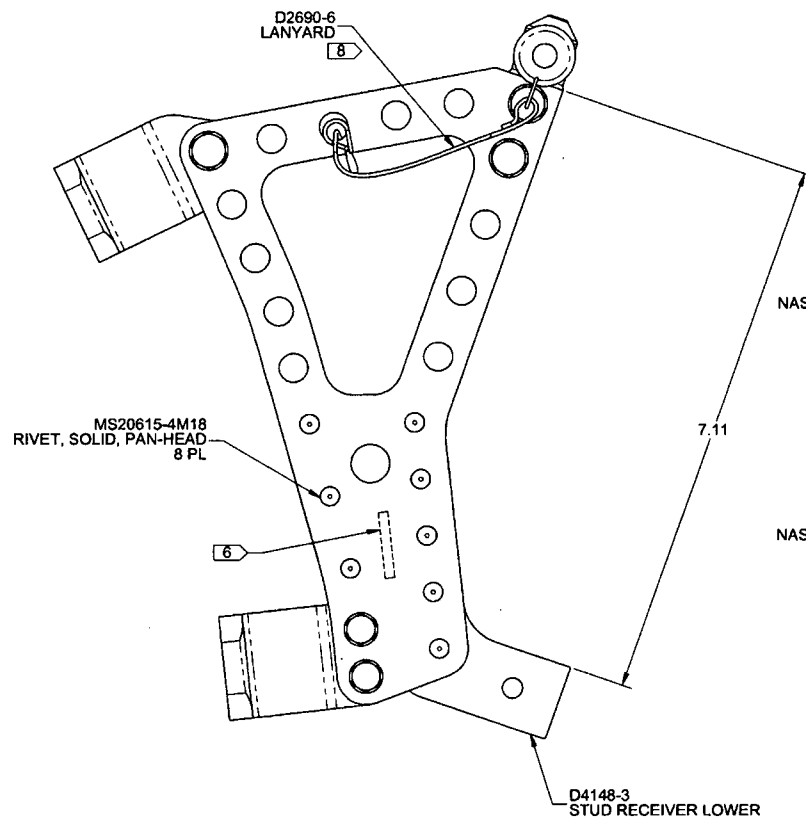
NO 106853 MJS

13-09-12

RELEASED  
2013-08-16

|            |   |  |              |
|------------|---|--|--------------|
| E          | B6-4 Ø0.286 HOLE ADDED FOR CARGO TUBE INSTALLATIONS.  | AJS  | 13.07.22     |
| D          | HOLE DIA CHANGED TO 0.252" (D6-3); HOLE DIA CHANGED TO 0.250" (C8-5); REPLACED QTY(2) AN3C12A, MS21043C3 AND QTY(4) NAS1149C0332R WITH QTY(2) AN4C13A, MS21043C4 AND QTY(4) NAS1149C0432R (D3-1, C4-2)  | SC   | 11.02.22     |
| C          | REDESIGNED D4148-1/-3 TO ADDRESS COMPATIBILITY ISSUES WITH D350-591 SHORT STEPS   | MB   | 10.10.12     |
| B          | REPLACED QTY(3) MS20615-4M18 WITH QTY(2) EACH AN3C12A, MS21043-3 AND QTY(4) NAS1149C0332R WASHER (ZN D3-1, B7-2 & B4-2); MS20615-4M18 WAS MS20615-4M20 (ZN D3-1 & B7-2); Ø0.191 2 PL REPLACES Ø0.129 3 PL (ZN D6-3); Ø0.129 7 PL WAS 10 PL (ZN A7-3); Ø0.191 WAS 0.129 (ZN C8-5). REASON: SEE TR-D350-607-2 REV. B. | MB   | 10.07.05     |
| A          | NEW ISSUE   | MB   | 10.06.18     |
| REV.       | DESCRIPTION   | BY   | DATE         |
| DESIGN     | MB  | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA   |              |
| DRAWN      | AJS   |  |              |
| CHECKED    |   | DRAWING NO.  | REV. E       |
| MFG. APPR. |   | D4148  | SHEET 1 OF 5 |
| APPROVED   |   | TITLE  | SCALE        |
| DE APPR.   |   | FWD X-TUBE LUG ASSY  | NTS          |
| DATE       | 13.07.22  | COPYRIGHT © 2010 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD |              |

106853



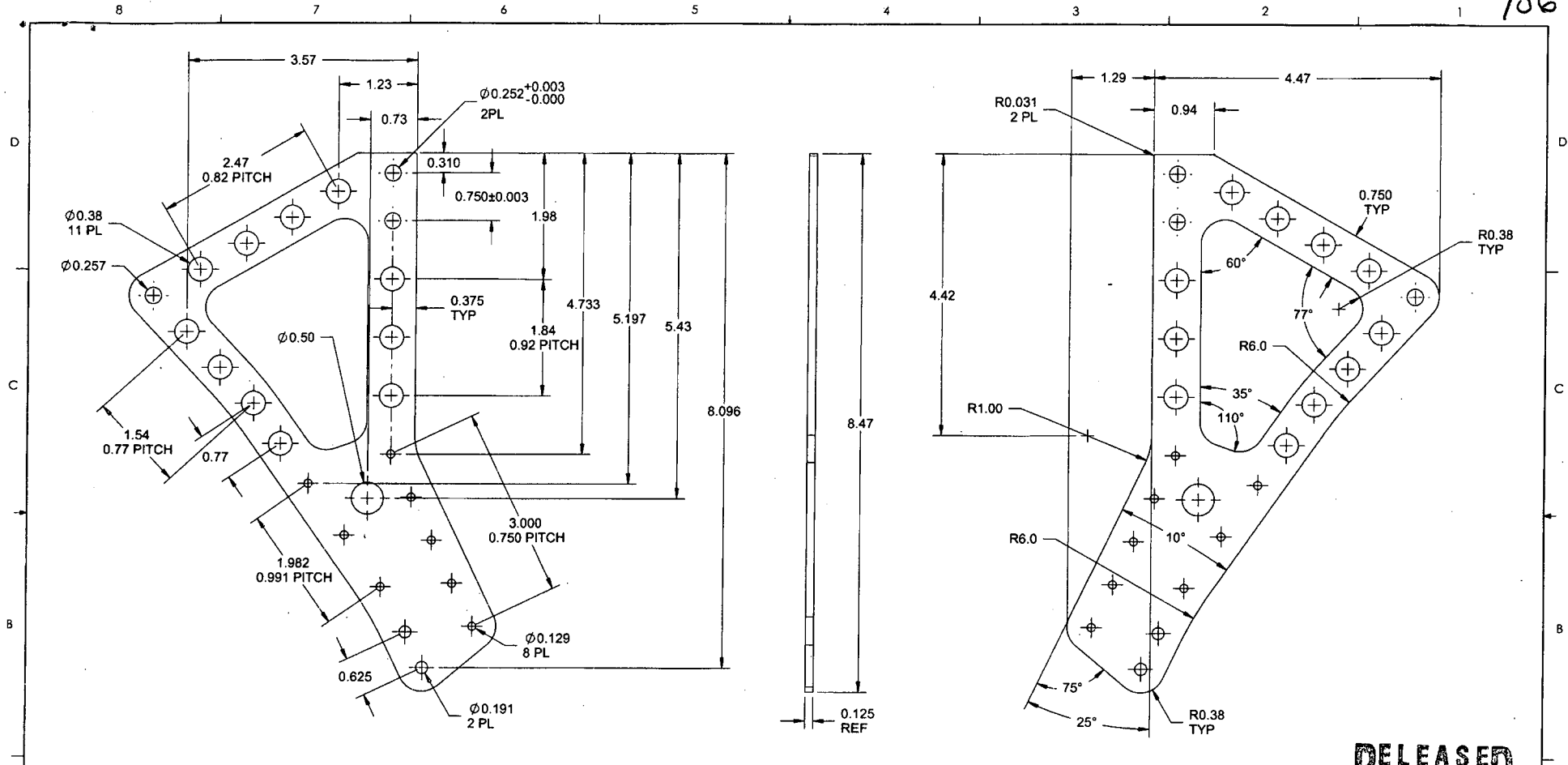
**D4148-041 FWD X-TUBE LUG ASSY**

**RELEASED**  
2013-08-16

|            |                    |  |              |
|------------|--------------------|--|--------------|
| DESIGN     | MB                 | <b>DART AEROSPACE LTD</b>  |              |
| DRAWN      | AJS                | HAWKESBURY, ONTARIO, CANADA  |              |
| CHECKED    | <i>[Signature]</i> | DRAWING NO.  | REV. E       |
| MFG. APPR. | <i>[Signature]</i> | D4148  | SHEET 2 OF 5 |
| APPROVED   | <i>[Signature]</i> | TITLE  | SCALE        |
| DE APPR.   | <i>[Signature]</i> | FWD X-TUBE LUG ASSY  | NTS          |
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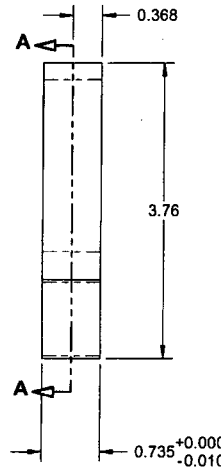
**D4148-1 FWD X-TUBE LUG PLATE**

**RELEASED**  
2013-08-16

- NOTES:**
- 1) MATERIAL: 303/304/316 STAINLESS STEEL 0.125" SHEET ANNEALED 2B FINISH, PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240 REF DART SPEC M304S11GA OR M303S11GA
  - 2) FINISH: NONE
  - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: NONE
  - 7) WEIGHT: 0.52 lbs

|            |          |   |              |
|------------|----------|---|--------------|
| DESIGN     | MB       | <b>DART AEROSPACE LTD</b>   |              |
| DRAWN      | AJS      | HAWKESBURY, ONTARIO, CANADA   |              |
| CHECKED    |          | DRAWING NO.   | REV. E       |
| MFG. APPR. |          | <b>D4148</b>  | SHEET 3 OF 5 |
| APPROVED   |          | TITLE   | SCALE        |
| DE APPR.   |          | <b>FWD X-TUBE LUG ASSY</b>  | NTS          |
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A horizontal number line with tick marks at every integer from 0 to 8. The numbers 0, 1, 2, 3, 4, 5, 6, 7, and 8 are labeled above the tick marks. The segment between 0 and 1 is shaded gray.



Technical drawing of a mechanical part showing dimensions and tolerances:

- $\varnothing 0.453^{+0.010}_{-0.000}$
- $\varnothing 0.250$
- $R6.0$
- $0.06 \times 45^\circ \text{ CMF}$
- $0.80$
- $R0.031$
- $2 \text{ PL}$
- $0.625$
- $1.97$
- $2.74$
- $3.27$
- $4.65$
- $2.12$
- $R0.38 \text{ TYP}$
- $9^\circ$
- $6^\circ$
- $65^\circ$
- $90^\circ$
- $0.59$
- $0.89$

RELEASED  
2013-08-16

1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A582 OR ASTM A276  
REF DART SPEC M304B OR M303B

2) FINISH: NONE




3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

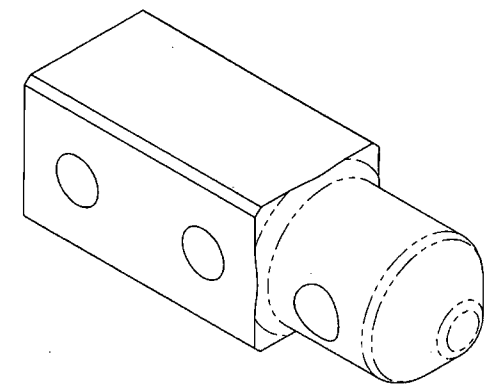
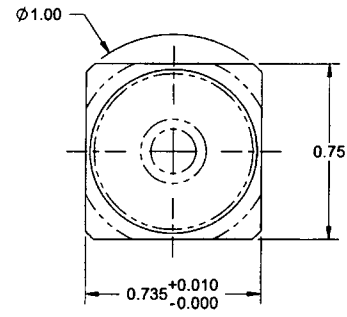
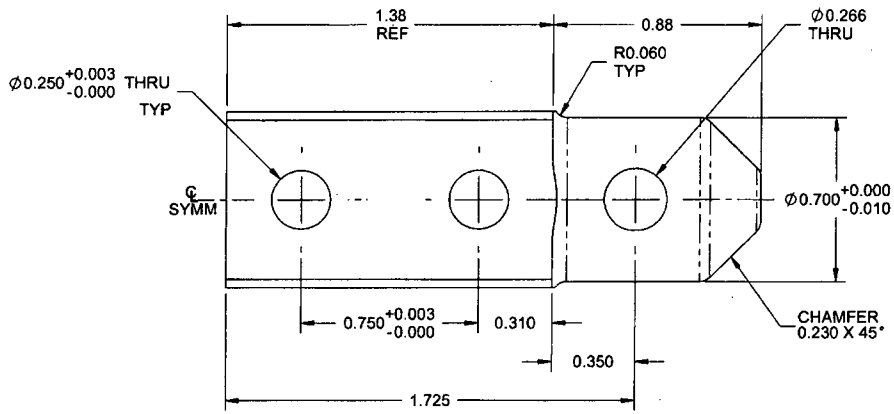
5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: NONE

7) WEIGHT: 1.51 lbs

|            |  |  |              |
|------------|--|--|--------------|
| DESIGN     | MB   | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA<br><br>DRAWING NO. <b>D4148</b><br><br>TITLE <b>FWD X-TUBE LUG ASSY</b><br><br>COPYRIGHT © 2010 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. IT IS SUPPLIED ON THE CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITING THE DART AEROSPACE LTD. | REV. E       |
| DRAWN      | AJS  |  | SHEET 4 OF 5 |
| CHECKED    |     |  | SCALE        |
| MFG. APPR. |     |  | NTS          |
| APPROVED   | AM  |  |              |
| DE APPR.   |  |  |              |
| DATE       | 13.07.22   |  |              |

106853



**D4148-5 EYEBOLT STUD**

**RELEASED**  
2013-08-16

- NOTES:**
- 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A582 OR ASTM A276  
REF DART SPEC M304B OR M303B
  - 2) FINISH: NONE
  - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: NONE
  - 7) WEIGHT: 0.27 lbs

|            |          |  |              |
|------------|----------|--|--------------|
| DESIGN     | MB       | <b>DART AEROSPACE LTD</b>  |              |
| DRAWN      | AJS      | HAWKESBURY, ONTARIO, CANADA  |              |
| CHECKED    |          | DRAWING NO.  | REV. E       |
| MFG. APPR. |          | <b>D4148</b>   | SHEET 5 OF 5 |
| APPROVED   |          | TITLE  | SCALE        |
| DE APPR.   |          | <b>FWD X-TUBE LUG ASSY</b>   | NTS          |
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